Newsletter of the North Dakota Nonpoint Source Pollution Task Force

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Bank Restabilization Work Performed at Dead Colt Creek Reservoir

submitted by Chris Nannenga, Ransom County SCD Watershed Coordinator

The North Dakota Game and Fish Department (NDGF) recently committed money from its *Save Our Lakes* (SOL) Program to restabilize several areas of bank erosion along the south shoreline of Dead Colt Creek Reservoir. The SOL Program was developed by the NDGF to enhance and restore fishery resources in North Dakota.

Because of the severe erosion from wave action, the NDGF identified Dead Colt Creek Reservoir as a priority lake, and restoration efforts were conducted there during the first two weeks of November 2002. The Ransom County Water Resource Board and Ransom County Soil Conservation District (SCD) were also involved in the project. The work was conducted by Dakota Improvement of Oakes, N.D.

Three areas were reshaped using a large excavator. Rocks and dead trees were placed at the toe of the eroded banks to form a wave break. The dead trees were anchored into the bank using chain and cinder blocks. The undercut banks were then reshaped to an approximate 3:1 side slope, and native grass was seeded on the slopes of the banks.

Erosion control fabric was placed from the toe to the top of the banks to prevent erosion until the grass seed becomes established. Willow cuttings were placed along the toe to further stabilize the areas, and trees will be planted at each site in the spring of 2003.

Chris Nannenga, Ransom County

Shoreline of Dead Colt Creek Reservoir before (above) and after (below) restoration work.

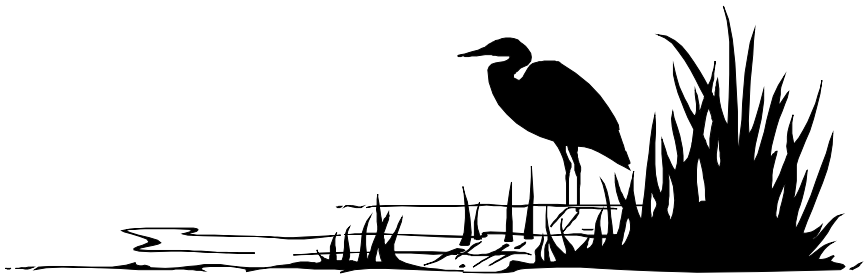
*(**Dead Colt Creek**...cont. on page 2)*

*(**Dead Colt Creek**...cont.from page 1)*

SCD's watershed coordinator, oversaw construction at each site. Local landowners Pat Freeberg and Daryl Olson donated the rocks used at each site.

The Ransom County SCD and the North Dakota Department of Health currently are conducting a water quality assessment project on the Dead Colt Creek Reservoir. The main focus of this project is to determine the effects of nutrient and sediment loads on Dead Colt Creek Reservoir and to determine what can be done to control nutrients and sediments entering the reservoir.

For more information, contact Chris Nannenga, Ransom County SCD Watershed Coordinator, at 701.683.4101 extension 3.



"Keep North Dakota Clean" Poster Contest Expands to Grades One Through Eight

The "Keep North Dakota Clean" (KNDC) Poster Contest has expanded by two grades and now includes all North Dakota students in grades one through eight. Each school is requested to submit one winning poster from each grade and special needs class by the deadline on March 14, 2003.

In 1804, Lewis and Clark discovered a land filled with abundant wildlife, clean water and air, rich soils, distinctive plants and unique peoples. The bicentennial celebration of this epic journey begins in 2003. The KNDC poster contest helps spark an interest in beautifying and improving our state for its citizens and visitors. The poster contest encourages students to create posters that reflect their understanding of the importance of keeping the state clean, recycling and making use of other energy- and waste-saving measures, as well as conserving and wisely using our natural resources.

The winners, their immediate families and teachers will be invited to an awards luncheon with the governor, or his representative at the Lewis and Clark Center in Washburn May 2, 2003. All winners will receive a medallion, certificate and U.S. savings bond. The first-place posters from each grade and special needs class will be reproduced on billboards across the state.

Each grade focuses on a different theme. The grade, its 2003 theme and sponsors are listed below:

Grade One: *Keep North Dakota Clean* - N.D. Department of Transportation

Grade Two: *Only YOU Can Prevent Wildfires!* - N.D. Forest Service-Fire Management and N.D. State Garden Clubs

Grade Three: *Using and Protecting Our Water* - N.D. State Water Commission-Project WET

Grade Four: *Pollution Prevention for Our Future* - N.D. Department of Health-Division of Solid Waste

Grade Five: *Trees are Terrific…from Acorn to Oak!* - N.D. Forest Service-Community Forestry and Project Learning Tree

Grade Six: *Refuges – Homes for Wildlife* - U.S. Fish and Wildlife Service and N.D. Chapter of the Wildlife Society

Grade Seven: *Keep Our Streams and Rivers Clean* - N.D. Department of Health-Division of Water Quality

*(**KNDC Contest**...cont. on page 6)*

RC&Ds Award Scholarships for Winning Essays

The following two essays were written by winners of water quality scholarships offered by Dakota Prairies Resource Conservation and Development and Dakota West Resource Conservation and Development. The RC&Ds jointly offer a scholarship program to participating organizations of the Southwest North Dakota Water Quality Education 319 Program. The participating organizations will establish an essay topic each year and provide scholarships to the winning high school seniors who plan to enter college in the near future.

Scholarships are provided on a competitive basis to students who research and write essays with the water quality theme chosen by the participating organization. Since the inception of the scholarship program in July 2000, about 140 essays have been written. Scholarships ranging from $100 to $500 have been awarded to 14 youth from the 18 counties served by the RC&Ds in southwest North Dakota.

This activity continues to grow each year, creating an increased awareness and understanding of water quality issues for our state.

Look for other winning essays in future issues of the *Quality Water* newsletter.

Water Quality Scholarship Essay

by Nathan Horner, Kidder County Soil Conservation District

Old habits are hard to break. Many producers manage their farms the way they do because that's the way it's been managed for generations. It always seems easier just to do what dad did. The fact of the matter is that what dad did wasn't always the best.

Our natural resources play an important role in developing fertile soil, green pastures and quality water. We need to know how to manage and control the natural assets that we have been given so that we always have them. Many farmers and ranchers do little to conserve our natural resources simply because it is easier just to do what has been done in the past.

Having grown up on a ranch where I've seen the benefits of proper resource management and the downfalls of the lack thereof, I know how important and beneficial it is to be a steward of our natural resoures. One of the changes in managing our ranch that I have witnessed had to do with our grazing system. In the past, we had a season-long grazing system, but after seeing that we weren't utilizing the full potential of our pastures, we switched to a twice-over rotational grazing system. We made this change about five years ago, and I have seen a dramatic difference in our pasture quality ever since.

Pastures that are properly grazed not only produce more grass but also provide better nutrition for the animals using them. A rotational grazing system gives plants more time to regrow between grazing cycles. This also keeps plant residue and reduces wind and water erosion because of the cover on the soil.

Another benefit is that rotational grazing helps wildlife as well. The taller grass proves to be great nesting cover for upland game such as pheasants and sharptail grouse. Pasture land can be very valuable but needs to be properly managed in order to reach the highest level of production and economic benefits.

Preserving resources on cropland is something farmers need to make a part of their management practices. The crop that is harvested is only as good as the soil in which it is rooted. The main concern with cropland is erosion during the non-growing season. This is caused many times due to uncontrollable factors such as climate and soil texture. However, the producer can control the extent of the damage and may possibly prevent it.

One factor that can be controlled by the producer is the soil surface. If the soil is short on residue the producer should consider things such as cover crops or

*(**Essay**...cont. on page 4)*

*(**Essay**...cont. from page 3)*

ridging in the field to control wind erosion. Also, reducing the unsheltered distance in a field can be beneficial. Shelterbelts have proven to be successful in reducing wind erosion because there isn't a long, open area prone to erosion.

Grassed waterways are one way to help producers control water erosion on their cropland. Waterways help move water to a safe outlet, and many times an additional benefit is a better cropping system, which also helps to control water erosion on the land. No-till cropping systems increase infiltration and store water in the soil, rather than running off.

Controlling water erosion also helps to improve water quality. Water erosion can degrade water quality by carrying soil particles downstream. Runoff water may contain chemicals and nutrients either dissolved or attached to sediments.

Through range judging in the FFA and research that I have done, I have obtained much knowledge about preserving our natural resources. From my experiences, I have seen first-hand how valuable simple adjustments can be to improving our stewardship of the land. I have come to the conclusion that, maybe this time, Dad is on to something.

How Water Quality Will Affect Me in the Future

by Shannon Haag, Oliver County Soil Conservation District

Water is the single most important thing on the planet Earth. Every day it is taken for granted and wasted in enormous amounts.

Water quality affects not only humans, but other animals and vegetation as well. Water is used for many things, and the idea that one day it may be unusable is frightening.

Since 1991, the US Geological Survey has conducted the full-scale National Water Quality Assessment Program. The goals of this program are to describe the status of the nation's surface and ground water and to provide an understanding for the human factors that are affected by water quality. The Red River Valley in North Dakota was selected for study because high quality water is an important resource vital to the area's economy. The USGS found that toxic contamination is a high concern for the water in the Red River Valley.

Substances from landfills, crude-oil pipelines and fertilizers were found. Small amounts of untreated sewage were also found, possibly from the meat, sugar beet and grain processing that are an important industrial part of the Red River Valley.[1]

This may not sound like a big problem now, but if something is not done, the water quality in North Dakota could deteriorate. Because this problem is so unsettling, there are some things we can do as citizens.

Feedlot programs in North Dakota can become a problem by contaminating the water supply. Even though livestock waste is valuable when used properly, it can be very harmful to water. Livestock waste can provide cropland with moisture and essential nutrients, but when it gets into the water it creates large quantities of algae, which kills fish and limits recreational activity. If the waste enters the ground water supply, it can contaminate wells used for drinking.

According to the North Dakota Department of Health, state laws prohibit the feeding of livestock or handling livestock waste in any way that would allow the waste to enter the water system, or to be washed into the water by runoff from snow or rain.

One way the Department of Health is preventing this from happening is by requiring an application, complete with a sketch of the farm, from the feedlot operator. It must show distances from barns and feeding areas to the surface waters and drainage areas. If the layout of the feelot meets the department's standards, a permit is granted. If the feedlot facility has the potential of causing waste to pollute the water, the department will require steps to be taken to prevent this. Some of the steps include fencing livestock out of a certain area or

*(**Water Quality**...cont. on page 5)*

*(**Water Quality**...cont. from page 4)*

creating a storage pond to contain and hold the waste.[2]

Conservation is another way humans can help keep the water quality high. Small things, such as taking shorter showers, turning the water off when brushing teeth and washing dishes and watering lawns less frequently can conserve water so not as much is wasted.

We need to keep our water clean for the benefit of humans and animals alike. Pollution, such as litter, toxic waste and pesticides contaminate the water supply so it is dangerous for drinking. Officials in the state of North Dakota can do their part by regulating industry, such as the power plants, sugar beet factories, grain processing plants and meat industries in the Red River Valley. We, as ordinary citizens, can be careful not to litter, especially near rivers and lakes. Farmers can keep pesticide usage down or use pesticides that are not harmful to the water supply.

In conclusion, I believe awareness is the place to start in the movement to help preserve the water quality of North Dakota. If a greater number of people know about the problem of water contamination, more can be done to keep it under control. I believe even one person can make a difference, and that is where the changes have to begin -- every person doing his or her part in conserving the water supply of the planet Earth.

[1]All according to http://mn.usgs.gov/redn/factsheets/wfs/wfs91_151.html

[2]All according to http://www.health.state.nd.us/ndhd/environ/wq/

North Dakota Department of Health NPS Website On-line

The North Dakota Department of Health has added a website to address nonpoint source pollution topics.

To get more information on NPS subjects or to view past issues of the *Quality Water* newsletter, go to:

http://www.health.state.nd.us/ndhd/environ/wq/nps/

EPA Announces Final CAFO Rule

On Monday, December 16, 2002, EPA announced the final agency rule for concentrated animal feeding operations (CAFOs). The rule will replace 25-year old technology requirements and permitting regulations that did not address today's environmental needs nor keep pace with growth in the industry. Effective manure management practices required by this rule will maximize the use of manure as a resource for agriculture while reducing adverse impacts on the environment.

The new rule applies to about 15,500 livestock operations across the country. Under the new rule, all large CAFOs will be required to apply for a permit, submit an annual report and develop and follow a plan for handling manure and wastewater. Large CAFOs are defined in the rule as operations raising more than 1,000 cattle, 700 dairy cows, 2,500 swine, 10,000 sheep, 125,000 chickens, 82,000 laying hens and 55,000 turkeys in confinement. About 500 million tons of manure are generated annually by an estimated 238,000 livestock operations.

To help these livestock operations meet the rule's requirements, Congress increased funding for land and water conservation programs in the 2002 Farm Bill by $20.9 billion, bringing total funding for these programs to $51 billion over the next decade. New technology is also being perfected to aid farmers in meeting this new rule.

States are being given significant flexibility to find geographically appropriate means of implementing the CAFO rule. This enables states to develop permits that take into account the size, location and environmental risks that may be posed by an operation. For more information visit the website: www.epa.gov/npdes/caforule.

*(**KNDC Contest**...cont. from page 2)*

Grade Eight: *Use Biofuels for Cleaner Air* - Red River Valley Clean Cities Coalition and Energy & Environmental Research Center

Special Needs: *Keep North Dakota Clean* - Keep North Dakota Clean, Inc.

Additional sponsors include: N.D. Association of Soil Conservation Districts, N.D. Council on the Arts, N.D. Department of Public Instruction, N.D. Department of Tourism, N.D. Game and Fish, N.D. Lewis and Clark Interpretive Center, N.D. Parks and Recreation, N.D. Solid Waste Management Association and Pro Forms.

For additional information on the KNDC poster contest, please contact Jean Monroe at 701.328.2581 or Glenda Fauske at 701.228.5446.

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